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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,355	06/06/2001	Tomonari Sendai	Q64810	2938
7590 01/03/2006 SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			EXAMINER SMITH, RUTH S	
			ART UNIT 3737	PAPER NUMBER

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/874,355

Applicant(s)

SENDAI, TOMONARI

Examiner

Ruth S. Smith

Art Unit

3737

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-46 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/138,527. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are an obvious combination/grouping of one another wherein: luminosity corresponds to brightness, statistical quantity corresponds to ratio, gain corresponds to coefficient, the illumination means includes GaN type lasers, and the dynamic range expanding means includes bit shifting.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2,9-11,18,19,29,30,32,33,34,44,45 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. Wang et al. disclose a method for obtaining a computed, or ratioed, fluorescent light image and assigning color thereto to form a tissue-state (probability of dysplasia) and tissue-form ("contour lines" to highlight areas to be targeted for biopsy) image (0075) (see also fig. 9 and 10 and (0105) regarding fluorescence images conveying additional tissue-form information). Wang et al disclose assigning one of color and brightness to the reflected image and forming an overlaid (inherently matching the number of pixels) fluorescence and reflectance image. The images are separately formed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6,12-15,20-26,35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al in view of Kaneko et al. Wang et al do not explicitly address assigning display gradation based on a statistical quantity. In the same field of endeavor, Kaneko et al. teaches that it is known to assign display gradation based on the maximum value and frequency (histogram) of the brightness levels of the image signals (col. 17 lines 3-20) to indicate normal or non- normal tissue. Kaneko further discloses using color discrimination scales and LUTS (inherently composed of a plurality of multiplication factors, or coefficients). See col. 16. lines 21-29. Further regarding claims 24 and 39, it is inherent that the computation circuit (141) of Kaneko et al processes data converted from the CCD in the form of 8 bits or less. It would have been obvious at the time the invention was made to a person of ordinary skill in the art

to assign the display gradation of Wang et al. based on statistical quantities, or histograms, of the image signals as demonstrated by Kaneko et al. to eliminate artifacts and provide enhanced visual discrimination between normal and diseased tissues and as is known in the art.

Claims 7,16,27,42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al in view of Zeng et al. Wang et al. differ from the claimed invention in that the color data being a chromaticity is not discussed expressly. In the same field of endeavor, Zeng et al. demonstrates that assignment of colors based on a chromaticity system is well known (col. 9 lines 1-28, fig. 5). It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use a chromaticity system as demonstrated by Zeng et al. for assignment of colors in the invention of Wang et al. as is well established in the art.

Claims 31,46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al in view of Hayashi et al. Wang et al. differ from the claimed invention in that a GaN type laser is not specifically addressed for providing UV excitation. In the same field of endeavor, Hayashi et al. discloses that the use of a GaN semiconductor laser for providing excitation between 380-440 nm is inexpensive, has a long lifetime, and high efficiency output (col. 3 lines 26-33 and col. 12 lines 39-45). It would have therefore been obvious at the time the invention was made to a person of ordinary skill in the art to use a GaN laser as taught by Hayashi et al. to provide UV excitation in the invention as taught by Wang et al for the above described reasons.

### ***Response to Arguments***

Applicant's arguments filed September 16, 2005 have been fully considered but they are not persuasive. The examiner does not agree with applicant's assessment of the Wang et al reference. The reference clearly teaches separately forming a fluorescence image and a reflected image wherein the images are formed by assigning at least of color data or brightness data to the images.

**Conclusion**

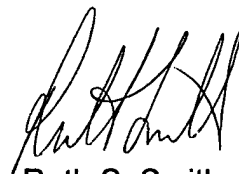
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S. Smith whose telephone number is 571-272-4745. The examiner can normally be reached on M-F 7:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ruth S. Smith  
Primary Examiner  
Art Unit 3737